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ARIZONA STATE UNIVERSITY ■ COLLEGE OF BUSINESS
CENTER FOR BUSINESS RESEARCH

Maricopa County Receives Most Migrants

Maricopa County received a disproportionately large 74 percent share of Arizona's net in-migration between 1980-81 and 1984-85, based on Internal Revenue Service records. In contrast, Pima County's share – 12 percent – was unexpectedly low, less than its share of Arizona's total population.

Yavapai and Mohave Counties received the greatest net in-migration of the non-metropolitan counties. Six counties – Apache, Gila, Graham, Greenlee, Navajo and Santa Cruz – experienced net out-migration during the 1980-85 period. Apache and Navajo Counties lost people in each year, while the other net losers posted gains in 1980-81 and/or 1981-82.

Maricopa County's migration followed the economic cycle, with greater flows during the expansion years of 1983-84 and 1984-85; the least net in-migration occurred during the 1982 recession. Among the other counties, however, local conditions sometimes overwhelmed the effect of the economic cycle on migration flows. Of most interest, but difficult to explain, is the pattern in Pima County, where the weakest flows occurred during the expansion.

This article marks the first time that county migration flows have been analyzed; the remainder of the

See "Migrants," page 2

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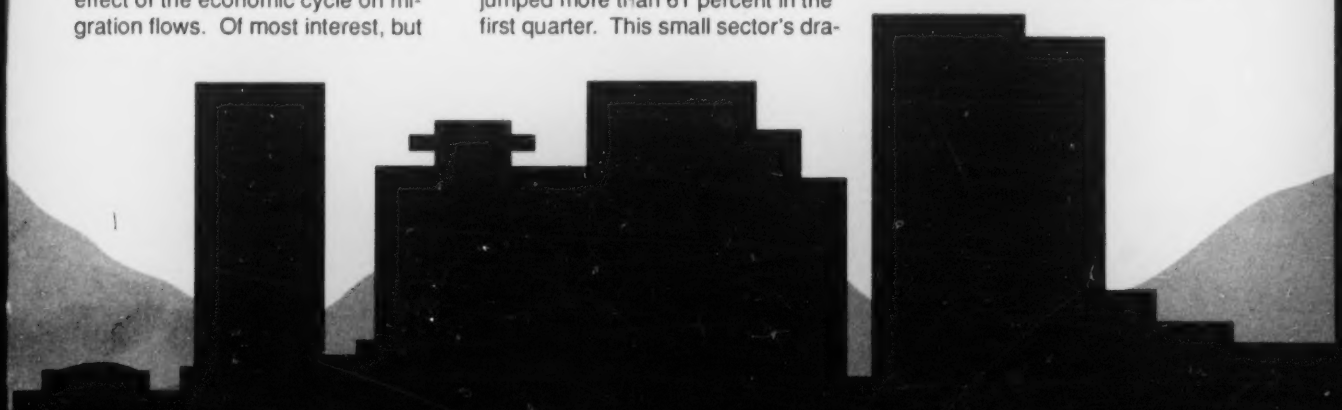
Arizona GSP Surges in First Quarter

The Arizona Gross State Product (GSP) expanded at an inflation-adjusted 13.5 percent annual rate during first quarter 1987. This rapid growth followed smaller increases in the last three quarters of 1986, retracing the Arizona economy's pattern of the past three years. GNP also exhibited an uptick in growth for the first quarter, but the magnitude of the surge in Arizona GSP far surpassed it.

The uptrend was not spread equally across all sectors of the economy. Although agriculture constitutes only about 3 percent of total Arizona GSP, agricultural product jumped more than 61 percent in the first quarter. This small sector's dramatic increase in output more than offset its declines of 1985 and 1986 and accounted for nearly one-half of total first quarter GSP growth, pushing agricultural GSP to record levels. Large quarterly changes in agricultural gross product are common, however; thus, the data do not indicate a strong rebound from agriculture's problems of the last few years.

In addition, the mining; trade; finance, insurance, and real estate; and services industries experienced healthy growth during the January-through-March period. Construction and manufacturing declined.

See "GSP," page 3



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article will concentrate on migratory movement during 1984-85, the latest year for which data are available. Like the state statistics, IRS data on flows to and from all counties in the country do not represent everyone who moved. The Center for Business Research plans to issue annual reports on county migration flows, similar to its updates on state flows (see the August *Arizona Business* for the latest state information).

1984-85 MIGRATION SUMMARY

When the number of people moving into or out of the county is compared to the size of the resident population, Apache, Greenlee and Cochise Counties experienced the greatest migration during 1984-85. In contrast, the urban counties (and Santa Cruz County) had the lowest migration rates.

In addition to the six counties that experienced net out-migration during the first five years of the 1980s, Cochise County also suffered a net outflow during 1984-85. Pima County's 1984-85 net gain was little more than the net increases of much smaller Yavapai and Yuma Counties.

Migration efficiency – the ratio of in-migration to out-migration – was highest in Maricopa County at 1.7. The efficiencies of Mohave (1.5) and Yavapai (1.4) Counties were also well above average. Greenlee County's ratio was very low at 0.5; Navajo and Graham Counties each had efficiencies of 0.8.

Considering only migration from out of state, Santa Cruz and Gila Counties recorded small net inflows, leaving only five counties with a net loss. Pinal, Mohave and Yavapai Counties all had efficiencies of 1.7, trailing Maricopa County's 1.9.

If only in-state migration is reviewed, just three counties – Maricopa, Yavapai and Apache – received a net inflow. Generally, poor economic conditions prompted people from throughout Arizona to move to the Phoenix area. Maricopa County's in-state migration efficiency – 1.2 – was equalled by Yavapai County. This relatively low efficiency indicates that net in-migration from in-state sources was not that great; many people moved to Maricopa County, but many also left.

1984-85 COUNTY DETAIL

Maricopa County

The Phoenix area received net in-migration from all Arizona counties except Yavapai. The largest net number came from Pima County.

Regionally, more than one-half of the net gain came from the Midwest, with which Maricopa County had a high efficiency of 3.4. Other western states provided less than one-fourth of the county's net in-migration – an efficiency of just 1.4. The migration efficiency with the South was equivalent, but the flows were less than one-half the magnitude of those with the West. With a higher efficiency of 2.3, the Northeast provided more net migrants than the South.

Of individual counties, Cook County (Chicago), Illinois, provided by far the highest *net* number of in-migrants to the Phoenix area. The greatest *actual* number of in-migrants came from Los Angeles County, but the efficiency of this migration was just 1.3, resulting in a net in-migration flow less than one-third the size of that from Cook County.

Other counties with which Maricopa County experienced large gross flows (in-migration plus out-migration) include the California counties of San Diego, Orange, San Bernardino and Santa Clara (San Jose); and Clark County (Las Vegas), Nevada. The Phoenix area lost more residents than it gained from San Diego and San Bernardino Counties.

Additional counties with which the Phoenix area enjoyed high efficiencies include Hennepin (Minneapolis-St. Paul), Minnesota; Salt Lake, Utah; and Denver, Colorado. The only other counties east of the Mississippi River that provided a sizable number of migrants were DuPage (Chicago), Illinois; Cuyahoga (Cleveland), Ohio; and the Detroit area counties of Wayne and Oakland.

Pima County

Net migration flows and migration efficiency in Pima County were much weaker than those in Maricopa County. Pima County sustained net out-migration with several Arizona counties, particularly Maricopa and Yuma.

More than 70 percent of Pima County's net in-migration from out of state came from the Midwest, but its 2.0 efficiency with that region was much lower than that of Maricopa County. Migration from the Northeast was positive, with a 1.6 efficiency, but the Tucson area suffered a net outflow to the South and barely received a net inflow from the West.

The greatest number of net in-migrants came from Los Angeles County, with which Pima County's efficiency was 1.3, equivalent to the Phoenix area's ratio with Los Angeles. In contrast, Pima County's efficiency with Cook County, Illinois, which provided nearly as many net in-migrants as Los Angeles, was only 2.3, barely one-half Maricopa County's ratio with Cook County.

The Tucson area suffered net out-migration to several counties, including the California counties of San Diego, Santa Clara, Orange and San Bernardino; Bernalillo County (Albuquerque), New Mexico; Clark County, Nevada; and Dallas County, Texas.

Non-Metropolitan Counties

Most of the rural counties received net in-migration, though of small numbers, from the Northeast and Midwest. However, net out-migration was common to the South and West.

Many of the counties did not have a sizable net flow with any out-of-state county. However, Mohave and Yavapai Counties received a net inflow from the Los Angeles-Orange County area. The northern counties of Apache, Navajo and Coconino each suffered net out-migration to McKinley, New Mexico, which borders Northern Arizona.

– Tom R. Rex
Research Manager

"GSP," from page 1

In recent years, the state's agriculture and mining industries have suffered downturns, even though the overall economy has been in an upswing. Adjusted GSP, which excludes the volatile mining and agriculture industries and, therefore, more closely follows the general economic cycle, has experienced a healthier growth trend than the total GSP series. Given the increases in agriculture and mining for first quarter 1987, adjusted GSP did not rise as much as total GSP during that period.

1986 REVISIONS

After revisions to most data used to calculate GSP, growth for 1986 – 5.2 percent on an inflation-adjusted basis – was stronger than originally reported (4.8 percent). The revisions particularly affected fourth quarter GSP, which improved from a 1.6 percent decline to an increase of 5.9 percent, at an annual rate. Growth was stronger than the original 1986 estimates in the construction, manufacturing, and government sectors, while estimates for the trade and the finance, insurance, and real estate industries were too high. The adjusted GSP figure for 1986 was also revised up from the original growth estimate of 5.7 percent to 6.0 percent. However, even with this revision, GSP turned in its weakest performance since the recession year 1982.

The 1986 GNP quarterly estimates were also revised upward, implying a growth rate of 2.9 percent for the year, rather than the 2.5 percent figure released earlier. This more positive indication of national economic activity continued into 1987; GNP expanded further, rising at an annual rate of 4.4 percent in the first quarter.

OUTLOOK

Weakness in the state's construction and manufacturing sectors remain a legitimate cause for concern. However, the surge in revised GSP growth estimates for fourth quarter 1986 and first quarter 1987 should reduce any worries induced by the original estimate of a decline in fourth quarter GSP. Based on the latest estimates, the Arizona economy again seems to be following the familiar pattern of rapid first quarter growth. Arizona economists apparently feel that the "high-first-quarter-then-lower-rest-of-year" pattern will recur in 1987, since the latest *Arizona Blue Chip* consensus forecast for inflation-adjusted Arizona personal income is for only about 3 percent growth in 1987.

– **Timothy D. Hogan,** *Director*
Center for Business Research

TABLE 1
ECONOMIC GROWTH

	Arizona Gross State Product				Gross National Product
Quarter	*Billions of Current Dollars, Annualized*	*Billions of 1982 Dollars, Annualized*	*Annualized Percent Change (1982 Dollars)*	*Annualized Percent Change (Adjusted GSP)**	*Annualized Percent Change (1982 Dollars)*
First 1985	46.821	42.516	17.5	15.8	3.8
Second 1985	47.218	42.450	-0.6	3.2	2.1
Third 1985	48.319	43.089	6.0	7.5	4.0
Fourth 1985	49.134	43.548	4.3	5.0	3.1
First 1986r	50.802	44.729	10.8	9.4	5.2
Second 1986r	51.217	44.871	1.3	4.1	0.6
Third 1986r	51.868	45.096	2.0	2.0	1.5
Fourth 1986r	53.092	45.766	5.9	6.7	1.5
First 1987	55.267	47.310	13.5	7.6	4.4

*The adjusted GSP is the annualized GSP in billions of 1982 dollars, minus the contributions of the agriculture and mining industries.

r Revised

Source: Center for Business Research, College of Business, Arizona State University. GNP data are from the U.S. Department of Commerce, Bureau of Economic Analysis.

Correction

In the June 1987 Arizona Business, *the "new" and "resale" columns of numbers were mistakenly reversed in the "number of sales" section of the "Metropolitan Phoenix Home Sales" table on page 8. The corrected section follows:*

TABLE 1
METROPOLITAN PHOENIX HOME SALES

	Single Family			Townhouse/Condominium			Grand
First Quarter 1987	*Resale*	*New*	*Total*	*Resale*	*New*	*Total*	Total
Number of sales	10,080	1,270	11,340	2,510	470	2,980	14,320
Percent change from:							
Fourth quarter 1986	-4	-49	-13	25	-33	10	-9
First quarter 1986	6	0	5	51	-13	35	10

Source: Arizona Real Estate Center and Center for Business Research, College of Business, Arizona State University; from data supplied by Marketron Services, Inc., Phoenix.

Home Sales Remain Strong in Second Quarter

The number of homes sold in the Phoenix metropolitan area during second quarter 1987 rose to the second highest quarterly total of the 1980s. Compared to second quarter 1986, the number of sales was 7 percent higher (see Table 1), the eighth consecutive quarter in which sales exceeded the number of the year-earlier quarter.

Strength in the resale home market accounted for the improvement in sales during the year ending in the second quarter. Sales of existing homes increased 9 percent, while new home sales declined 4 percent.

Seasonally adjusted, the number of second quarter sales (15,560) declined 5 percent from the first quarter total and was less than the numbers for the two prior quarters as well (see Figure I). Existing home sales fell slightly between the first and second quarters, but the number of new homes sold rose, following two sharp quarterly declines.

MEDIAN HOME PRICE AND APPRECIATION RATE

The median price of all homes sold in the Phoenix area during the second quarter reached $80,000 for the first time. Though the seasonally adjusted increase from the first quarter was a relatively large 1.6 percent, the median sales price during second quarter 1987 was only 3.1 percent higher than in second quarter 1986. This annual advance was the smallest since 1985.

After a brief recovery during 1986, prices of townhouses and condominiums again are showing softness. Seasonally adjusted, their median sales price fell in the second quarter. Compared to second quarter 1986, the median sales price of resale units was no higher in second quarter 1987; the median sales price of new townhouses and condominiums declined 7 percent.

The median price per square foot of resale properties dropped slightly in the second quarter. Compared to second quarter 1986, the square-foot price for single family homes was only 2.6 percent higher, while that for townhouses and condominiums was virtually unchanged. These modest gains correspond to the appreciation rate measured in the Phoenix area. For single family homes, the quarterly rate was 0.7 percent, placing the annual rate between the second quarters of 1986 and 1987 at 2.6 percent. Appreciation rates for townhouses and condominiums were lower: a quarterly rate of 0.0 percent and an annual rate of 0.3 percent.

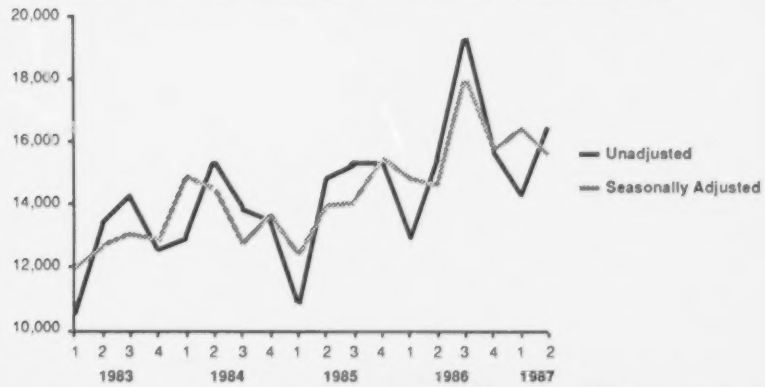
OUTLOOK

After rising sharply in April, mortgage interest rates have stabilized at approximately 10 percent for a conventional, 30-year, fixed-rate loan. Such rates should keep seasonally adjusted home sales close to the volume measured during the second quarter. Sales are unlikely to match the records set during 1986 unless interest rates decline.

Home prices and housing appreciation probably will continue to rise at a modest pace. With inflation holding near 4 percent, housing affordability stabilizing, and competitiveness in the Phoenix area housing market continuing, little pressure exists for higher home prices.

– Tom R. Rex
Research Manager

FIGURE I
NUMBER OF HOMES SOLD IN PHOENIX METROPOLITAN AREA



Source: Arizona Real Estate Center and Center for Business Research, College of Business, Arizona State University; from data supplied by Marketron Services, Inc., Phoenix.

TABLE 1
METROPOLITAN PHOENIX HOME SALES

	Single Family			Townhouse/Condominium			Grand
Second Quarter 1987	*Resale*	*New*	*Total*	*Resale*	*New*	*Total*	*Total*
Median sales price	$81,500	$92,925	$84,000	$65,000	$64,500	$65,000	$80,000
Percent change from:							
First quarter 1987	2.5	-1.7	3.2	0.8	-6.5	0.0	2.4
Second quarter 1986	5.6	5.7	5.0	0.0	-7.3	-2.1	3.1
Number of sales	11,570	1,870	13,440	2,510	590	3,090	16,530
Percent change from:							
First quarter 1987	15	47	19	0	26	4	15
Second quarter 1986	5	-2	4	28	-8	19	7

Source: Arizona Real Estate Center and Center for Business Research, College of Business, Arizona State University; from data supplied by Marketron Services, Inc., Phoenix.

Housing Affordability Sags in Second Quarter

Affordability of Phoenix area homes plummetted during second quarter 1987, after generally advancing for more than two years (see Figure I). The index for new homes dipped below 100, having exceeded that level for just one quarter. At 96, the index was 6 percent lower than it was in the first quarter (see Table 1). Though the index for resale homes remained relatively high at 109, its second quarter decline – 11 percent – was greater than that in the new home index.

An index at or above 100 indicates that a median-income household is able to qualify for a median-priced home, assuming a 15 percent downpayment on a fixed-rate, conventional, 30-year mortgage and an income qualification factor of 28 percent. During second quarter 1987, a median-income household could afford an $89,650 home – more than the median-priced resale home but less than the median-priced new home.

COMPONENT CHANGES

A sharp rise in mortgage interest rates during second quarter 1987 caused the affordability indexes to decline. The interest rate advance was the first since third quarter 1984 (see Figure II) and the largest since the affordability indexes began in 1981. The effective interest rate (contract rate plus fees and charges, or "points") climbed to 10.6 percent, nearly as high as in the second and third quarters of 1986. As a result, the affordability indexes dropped to levels barely above those of second quarter 1986.

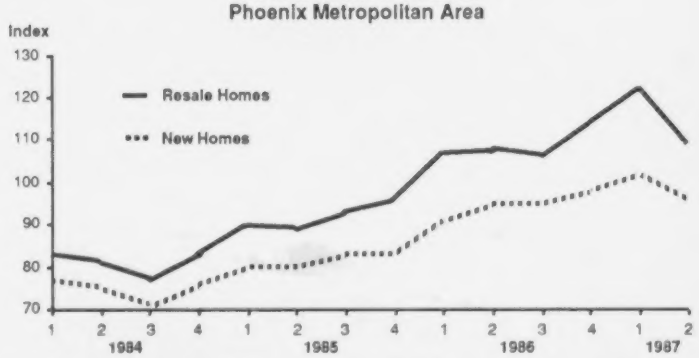
The index for resale homes declined more than the index for new homes because the median sales price of existing homes advanced 2.5 percent, while the median sales price of new homes declined 1.7 percent during the second quarter.

OUTLOOK

Home prices and incomes should continue to rise at similar rates. With mortgage interest rates remaining steady, the affordability indexes should stabilize, near the levels of the second quarter.

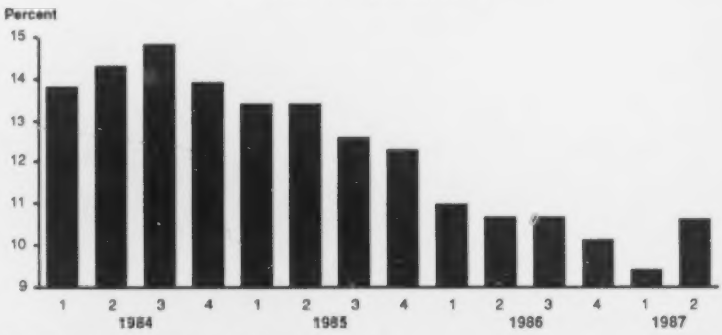
– **Tom R. Rex**
Research Manager

FIGURE I
AFFORDABILITY INDEXES
Phoenix Metropolitan Area



Source: Arizona Real Estate Center and Center for Business Research, College of Business, Arizona State University

FIGURE II
EFFECTIVE MORTGAGE INTEREST RATES
Phoenix Metropolitan Area



Source: Federal Home Loan Bank Board *News*

TABLE 1
HOUSING AFFORDABILITY INDEXES
Metropolitan Phoenix

			Resale Homes			New Homes		
Quarter	*Median Gross Monthly Income*	*Effective Interest Rate*	*Median Sales Price*	*Monthly Housing Payment*	*Affordability Index*	*Median Sales Price*	*Monthly Housing Payment*	*Affordability Index*
1st 1986	$2,730	11.0%	$75,000	$710	107	$88,200	$840	91
2nd 1986	2,760	10.7	77,150	720	108	87,950	820	95
3rd 1986	2,800	10.7	79,150	740	106	88,850	830	95
4th 1986	2,840	10.1	79,100	700	114	91,900	810	98
1st 1987	2,890	9.4	79,500	660	122	94,500	790	102
2nd 1987	2,940	10.6	81,500	750	109	92,925	860	96

Source: Arizona Real Estate Center and Center for Business Research, College of Business, Arizona State University. Interest rates are from the Federal Home Loan Bank Board *News*.

July Purchasing Indicators Reflect Slowing Growth

The Arizona economy continued to expand in July, although the rate of growth slowed somewhat. New orders and production grew at only half the June rate, and inventory declined for the first time since November, removing that growth stimulus. Employment, however, registered a good increase, its largest in four months.

While the growth rate showed signs of moderating a bit as the last half of the year began, the economy should continue to expand through the end of 1987. Inflation will intensify somewhat but should remain at a manageable level. Further employment increases can be anticipated as the Arizona economy finishes its fifth year of slow, but sustained, expansion.

Table 1 presents the results of the July survey of Arizona purchasing managers. Analysis of these results follows.

PRICES

Prices paid for purchased goods and services advanced again in July but at a slightly lower rate than in June. While the price increase rate so far in 1987 has been higher than in 1986, it still is relatively moderate and shows no sign of curtailing the upward economic growth trend.

DELIVERY TIME

Delivery time on shipments from vendors stretched at a somewhat smaller rate in July than in June. Vendors to Arizona firms continue to experience growing levels of business.

INVENTORY LEVELS

Inventory levels of purchased materials dropped slightly in July, the first decline since November 1986. Substantial inventory buildups over the past six months have provided staying power to the economy, but inventory growth no longer is contributing to the economic expansion.

NEW ORDERS

New orders received by Arizona firms went up again, as they have each month this year. However, the July gain was well under the increase rate of June and the smallest since December. While the halving of the new order increase rate from June to July may indicate only a temporary decline, it also shows that the speed of economic growth is slowing.

PRODUCTION

Production also increased but at half the June rate and at the slowest rate since December. As usual, the production indicator followed the new order rate closely.

EMPLOYMENT

Employment rose at a substantially larger rate than in June. This indicator's growth has been strong in 1987, and July's increase was not only the seventh in a row but also the highest since April.

PURCHASES

Purchases of materials and supplies grew again but at a substantially lower rate than in June. This increase was the smallest since December and substantially less than those of the previous three months.

– Harold Fearon

Dr. Fearon is the National Association of Purchasing Management Professor in the ASU College of Business.

Arizona Purchasing Survey

Now in its 25th year of monthly reporting, Dr. Harold Fearon's survey of Arizona business conditions utilizes data from a questionnaire sent to members of the purchasing management associations of Arizona and southern Arizona. It asks them to indicate the direction of activity - higher, unchanged, or lower - of seven key measures of economic activity in the month just ended. These purchasing managers deal daily with supply, demand, and price factors in the marketplace; their aggregate readings have accurately charted the state's economic course for two decades, providing timely data on turning points.

TABLE 1
JULY PURCHASING SURVEY

	Percent of Purchasing Managers Indicating Each Response (July compared to June)		
Key Indicators	*Higher*	*Same*	*Lower*
Prices paid for major commodities	33	64	3
Delivery time from vendors	35	56	9
Purchased materials inventory level	29	40	31
New orders received	40	36	24
Production	34	42	24
Employment	26	66	8
Purchases	44	33	23

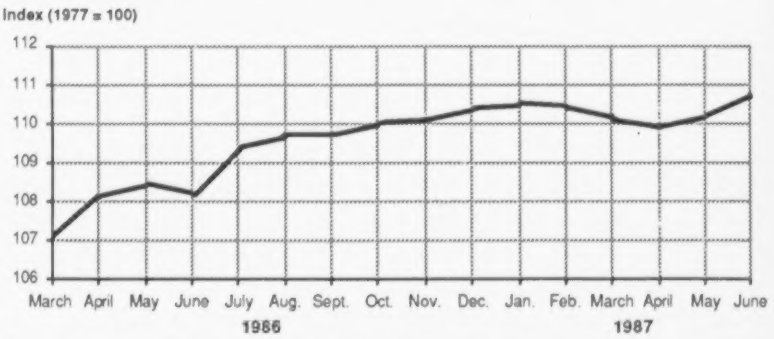
Source: Purchasing Management Association of Arizona and the Purchasing Management Association of Southern Arizona

Arizona Leading Index Rises Again in June

The Arizona Index of Leading Economic Indicators rose in June, the second consecutive monthly increase after three months of decline. The June index advanced to 110.7, a gain of .5 percent from May's revised 110.2 (see Figure I).

Although the June figure represents a new high for the index, the current value is only 2.3 percent greater than that of June 1986. The index has consistently signaled slow but positive economic growth for the past two years. The most recent figures on employment gains and personal income confirm that the Arizona economy is continuing to wind down from the record-setting growth of 1984 and 1985.

FIGURE I
ARIZONA INDEX OF LEADING ECONOMIC INDICATORS



Source: Economic Outlook Center, College of Business, Arizona State University

INDEX COMPONENTS

Seven of the index's 10 components rose in June. The greatest positive influence came from increases in seasonally adjusted components derived from a survey of Arizona purchasing managers. Gains were reported in purchased materials inventory levels, new orders, production, delivery times, and seasonally adjusted employment. The value of residential building permits and sensitive materials prices also pulled the index upward.

Negative influences on the index included a rise in first-time Arizona unemployment insurance claims and a slight decline in the manufacturing workweek, to 40.6 hours from the previous level of 41 hours. The money supply also fell, the fourth decline in the past five months.

TABLE 1
NET CONTRIBUTION OF INDIVIDUAL COMPONENTS TO THE ARIZONA INDEX OF LEADING ECONOMIC INDICATORS

	Net Contribution+			
	Mar.	*Apr.*	*May*	*June*
Delivery Time*	.04	.01	-.04	.17
Inventory Levels*	.10	-.08	.04	.03
New Orders*	.07	-.05	.01	.10
Production*	.06	-.04	.02	.01
Employment*	.01	.00	-.04	.04
Residential Building Permits	-.05	-.07	-.01	.12
Unemployment Insurance Claims	-.13	.09	.04	-.05
Average Workweek, Manufacturing	-.07	-.09	.21	-.09
Money Supply	-.13	.02	-.13	-.12
Change in Sensitive Materials Prices	-.11	.00	.14	.21
OVERALL INDEX CHANGE (%)	-.3	-.2	.3	.5

+The net contribution of each component is calculated by multiplying the monthly percent change in its index by its relative importance.

*Based on indicators from the purchasing management associations of Arizona and southern Arizona.

Source: Economic Outlook Center, College of Business, Arizona State University

OUTLOOK

The Arizona Index of Leading Economic Indicators is a reliable predictor of economic performance for the period at least six months ahead. With the June figures now in, it is safe to project sluggish economic growth rates for the remainder of 1987, similar to those of the first half.

Most of the current economy's strength seems to be in the transportation, communication, and public utilities sector. Construction is on the verge of a recession, evidenced by negative employment growth compared to one year ago. Other sectors, including the once-robust services industry and the finance, insurance, and real estate sector, are struggling with slow rates of growth. The extent to which consumer spending is weakening in the state is illustrated by a comparison of recent employment growth between the trade and mining industries. Mining jobs actually have increased faster than trade jobs during several months of this year.

– **Lee R. McPheters,** *Director Economic Outlook Center*

ARIZONA ECONOMIC INDICATORS

	Month or Quarter	Value	Percent Change from Previous Period	Percent Change from Year Ago	Year-to-Date Value	Year-to-Date Percent Change from Year Ago
GROSS STATE PRODUCT						
(In Billions of Dollars, at Annual Rate)						
Arizona - Current Dollars	1st Qtr.	55.267	4.1	8.8	NA	NA
Arizona - 1982 Dollars	1st Qtr.	47.310	3.4	5.8	NA	NA
CONSUMER PRICE INDEX (1977 = 100)						
Metropolitan Phoenix	2nd Qtr.	200.7	1.4	4.2	NA	NA
INDEX OF LEADING ECONOMIC INDICATORS (1977 = 100)						
Arizona	June	110.7	0.5	2.3	NA	NA
BUILDING PERMITS						
(Total Dollar Value in Thousands)						
Maricopa County	June	318,636	-11	8	1,981,148	-6
Pima County	June	47,049	6	-46	313,022	-33
Balance of State	June	71,281	23	62	317,471	3
Arizona	June	436,966	-5	2	2,611,641	-9
TOTAL HOUSING UNITS AUTHORIZED						
Maricopa County	June	2,036	-17	-38	14,495	-45
Pima County	June	429	8	-73	3,636	-42
Balance of State	June	867	-6	-3	5,032	-24
Arizona	June	3,332	-12	-42	23,163	-41
HOME SALES						
Maricopa County - Number	June	6,450	25	-1	30,850	8
Maricopa County - Median Price	June	81,000	1.9	2.3	79,300	3.7
HOUSING AFFORDABILITY INDEXES						
Metropolitan Phoenix - New Homes	2nd Qtr.	96	-5.9	1.1	NA	NA
Metropolitan Phoenix - Resale Homes	2nd Qtr.	109	-10.7	0.9	NA	NA
MORTGAGE INTEREST RATES						
(Conventional, 30-year, Fixed-rate)						
Maricopa County	July	10.1	-2.9	-2.9	NA	NA
POPULATION ESTIMATES						
(In Thousands)						
Maricopa County	2nd Qtr.	1,973	0.6	3.7	NA	NA
Arizona	2nd Qtr.	3,442	0.6	3.3	NA	NA
ELECTRICAL POWER SALES						
(In Millions of Kilowatt Hours)						
Arizona	June	3,782	20.5	6.1	18,484	8.7

NA = Not Applicable

Source: Center for Business Research, College of Business, Arizona State University

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Study of New Businesses/Survey of Their Owners

Entrepreneurs Find Valley Fertile for New Businesses

Entrepreneurs launched new businesses in the Phoenix metropolitan area at a rate of 300 per month during 1986, according to a recent study by the ASU College of Business. Because this count excludes franchised and branch businesses, as well as those that merely reopened or relocated, it is a good gauge of true entrepreneurial activity Valleywide.

Eating establishments were the predominant type of new business in 1986, with auto repair shops and hairstyling salons also popular. More than half of the new businesses were part of either the services or retailing sectors.

The 3,646 business start-ups contributed an estimated 10,000 jobs to Valley employment, about 25 percent of total job growth. This trend is in line with U.S. employment growth, much of which stems from the emergence of new firms, most of them small.

Located primarily in Phoenix (46 percent), the East Valley (31 percent), and Scottsdale (13 percent), the Valley's new businesses tended to cluster by type in various geographic areas. For example, new financial and real estate firms concentrated in south Scottsdale and along East Phoenix's Camelback corridor. New manufacturing firms

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Quarterly Economic Forecast Update

Economy To Move Forward Through '88

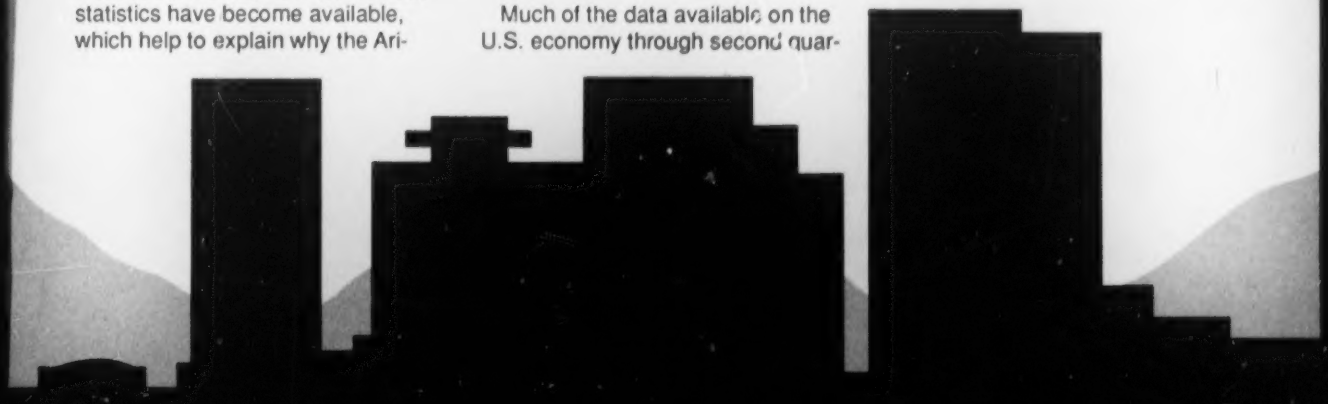
In spite of a variety of discouraging economic statistics, the Arizona economy is expected to grow through the end of 1988. By 1989, however, the probability of a recession increases sufficiently to raise doubts about how long the current economic expansion may be sustained.

In recent weeks, new and revised statistics have become available, which help to explain why the Arizona economy has grown at a slow pace while the national economy has moved ahead with relative alacrity. Some of the causes of Arizona's slower growth can be readily explained; others are not apparent without analysis of recent economic trends.

THE NATIONAL SITUATION

Much of the data available on the U.S. economy through second quarter 1987 portray surprisingly strong activity in light of concern about the stubborn trade and budget deficits. Most of the optimistic forecasts for ongoing expansion were based on the belief that the dollar's continuing

See "Forecast," page 7



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located most often in south Phoenix and in the north and central sectors of Tempe.

This article further details the study's findings and also reports on the authors' 1986 survey of new business owners in the Phoenix area. The survey revealed that the Valley's typical firm founder was a 40-year-old, Caucasian, married male who already lived in Arizona, had some post-high-school education, and was employed the previous year. This venture, in the services industry,was his first business; however, his prior experience included four different jobs in the industry. He did not study entrepreneurship before starting his firm, and he sought no organizational advice or help.

The typical founder lived in the city of Phoenix, where his home was within three miles of his business. His location choice was based on its nearness to customers and on its reasonable rent. If his firm should branch, he would expand to the East Valley.

The founder was different from his parents in that they did not own a business. Finding skilled employees was easy and accomplished via word-of-mouth. His primary source of financing was personal assets; however, he did obtain a bank loan, after visiting more than one financial institution. His most difficult problems were financing and cash flow.

The "Survey Results" section of this article provides additional data and analysis.

METHODOLOGY

The authors obtained data for the study of new business formations through a cooperative arrangement with *Arizona New Business Review*. Each month, the review publishes information on new, relocated and branch businesses in the metropolitan Phoenix area and the state of Arizona. In a typical month, the review lists some 700 newly opened businesses throughout Arizona and their telephone number, address, type of business, and number of employees. The authors recorded a business's opening as the month of its telephone hook-up.

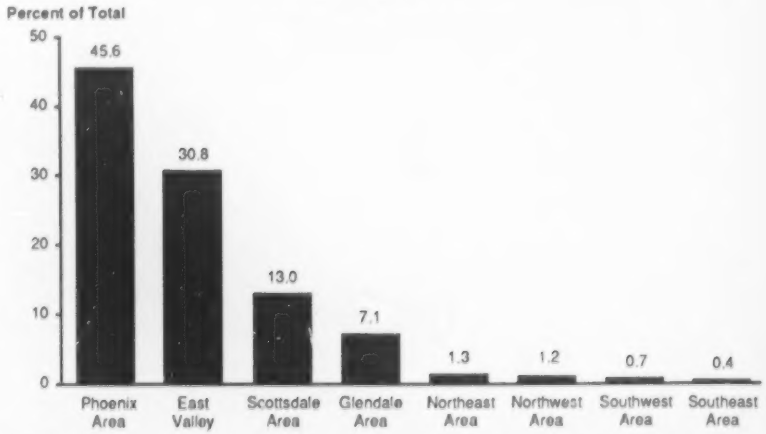
The survey of new firm founders was conducted during spring 1986 in the metropolitan Phoenix area. It was mailed to 1,000 business owners who had started their enterprise one year before, and 232 surveys were completed and returned. The undeliverable surveys (15.9 percent) provide a rough estimate of the number of those businesses that failed, although it is possible that some surveys were forwarded to the owners of failed businesses.

TABLE 1
METROPOLITAN PHOENIX BUSINESS START-UPS
1986, By City

City	Number	Percent of Metro Phoenix Total
Ahwatukee	7	0.2
Apache Junction	35	1.0
Avondale	10	0.3
Buckeye	3	0.1
Carefree	9	0.2
Cave Creek	15	0.4
Chandler	122	3.3
Chandler Heights	1	0.0
Deer Valley	1	0.0
El Mirage	7	0.2
Fountain Hills	22	0.6
Gilbert	42	1.2
Glendale	225	6.2
Goodyear	10	0.3
Guadalupe	4	0.1
Higley	1	0.0
Laveen	1	0.0
Litchfield Park	1	0.0
Maricopa	1	0.0
Mesa	495	13.6
Paradise Valley	4	0.1
Peoria	32	0.9
Phoenix	1,655	45.4
Queen Creek	8	0.2
Scottsdale	470	12.9
Sun City	16	0.4
Sun City West	8	0.2
Sun Lakes	3	0.1
Surprise	6	0.2
Tempe	423	11.6
Tolleson	2	0.1
Youngtown	7	0.2
TOTAL	3,646	100.0

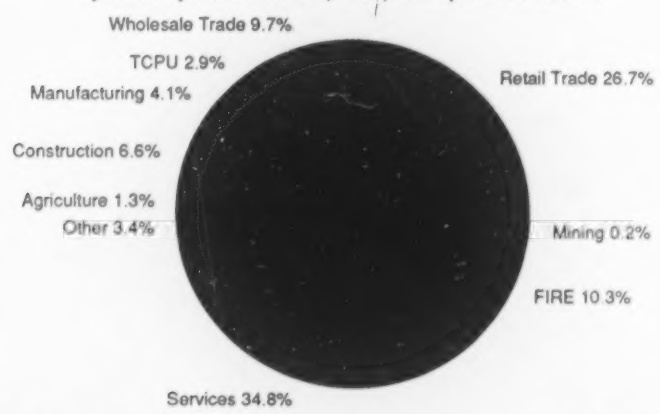
Source: Center for Business Research, College of Business, Arizona State University; and *Arizona New Business Review*, published by New Business Publishing, Inc., Phoenix, Ariz.

FIGURE I
METROPOLITAN PHOENIX BUSINESS START-UPS
1986, By Geographic Sector



Source: Center for Business Research, College of Business, Arizona State University; and *Arizona New Business Review*, published by New Business Publishing, Inc., Phoenix, Ariz.

FIGURE II
PERCENTAGE DISTRIBUTION OF BUSINESS START-UPS
By Industry Classification, 1986, Metropolitan Phoenix



Source: Center for Business Research, College of Business, Arizona State University; and *Arizona New Business Review*, published by New Business Publishing, Inc., Phoenix, Ariz.

TABLE 2
INDUSTRY DISTRIBUTION: NEW vs. EXISTING BUSINESSES
Metropolitan Phoenix, by Standard Industrial Classification

SIC*	New Businesses 1986 (%)	Existing Businesses 1985 (%)
Agriculture, Forest, and Fish	1.3	1.7
Mining	0.2	0.3
Construction	6.6	10.4
Manufacturing	4.1	5.5
Transportation, Communications, Public Utilities	2.9	2.6
Wholesale Trade	9.7	7.6
Retail Trade	26.7	21.0
Finance, Insurance, Real Estate	10.3	10.4
Services	34.8	32.6
Other	3.4	7.9
TOTAL	100.0	100.0
Retail Trade		
General Merchandise and Apparel	2.6	—
Eating and Drinking	6.9	—
Automotive Service and Repair	2.9	—
Food Stores	1.9	—
Other Retail	12.4	—
TOTAL	26.7	—
Services		
Personal Services	5.9	—
Health Services	3.2	—
Business Services	12.0	—
Other Services	13.7	—
TOTAL	34.8	—

*The SIC code was missing from several data entries, resulting in a small discrepancy in the total number of firms when classified by SIC rather than by city or zip code.

Source: Center for Business Research, College of Business, Arizona State University. Data on new businesses are from the *Arizona New Business Review*, published by New Business Publishing, Inc., Phoenix, Ariz. Data on existing businesses are from *County Business Patterns, 1985, Arizona*, published by the U.S. Department of Commerce, Bureau of the Census, March 1987.

STUDY RESULTS

Location of New Firms

Table 1 and Figure I offer a detailed view of the geographic distribution of business start-ups Valleywide. Leading the 1986 list are Phoenix (1,655), Mesa (495), Scottsdale (470), Tempe (423), Glendale (225), and Chandler (122). These six cities accounted for 93 percent of the new business formations.

Types of New Firms

The authors assigned each new firm a five-digit Standard Industrial Classification (SIC) code number to identify its business type, then analyzed the entire data base to describe the kind of new firm growth that occurred during 1986.

The services sector encompassed the largest number of new businesses, accounting for 34.8 percent of the total (see Figure II). The retail trade sector ranked second, with 26.7 percent. The distribution of new firms by type tends to be similar to the area's existing industrial structure, as set out in the census publication *County Business Patterns* (see Table 2). However, construction firms were slightly underrepresented, and trade firms were overrepresented among new businesses.

Because services and retail trade businesses constitute such a large percentage of start-ups, these two categories are broken down (see Table 3) to give more detail on formation activity. Nearly 7 percent of all new businesses are restaurants or drinking establishments; about 6 percent are various types of personal services businesses; and 12 percent are business services firms of different types.

Examination of business type by zip code shows a tendency for new firms to cluster by type in various areas of the Valley. For example, new finance firms concentrate in south Scottsdale and along east Phoenix's Camelback corridor (zips 85251, 85018, 85016), in Mesa (85202), and in Tempe (85282). New real estate firms tend to locate in east Phoenix (85018, 85016, 85012), south Scottsdale (85251, 85253), and Tempe (85282). Interestingly, no new firms in the finance group were started in predominantly retirement zip code areas such as Sun City, Sun City West, Youngtown, Sun Lakes, and east Mesa.

New construction and manufacturing firms appear to favor the southern portion of the Valley. The former open most often in south and east Phoenix (85040, 85018), north Tempe (85281), and west Mesa (85202, 85204). The latter cluster in south Phoenix (85034, 85040) and in the north and central sectors of Tempe (85281, 85282).

Analysis of the data base also revealed the frequency of particular

kinds of formations. Entrepreneurs started restaurants and supper clubs more than twice as often as any other type of business; on average, one new eating establishment opened every business day. Automobile repair and service shops, beauty salons, and real estate agencies followed, with high formation rates. Table 4 lists, by frequency, all of the business categories in which 20 or more new firms formed in 1986.

Timing of New Firm Formation

Business start-up activity in the Phoenix area during 1986 was strongest from January through April and declined from August through December, with low points in September and December (see Figure III). The Center for Business Research will continue to track start-up activity, on a monthly basis, for future comparison.

SURVEY RESULTS

The survey identified characteristics of the entrepreneur who develops an idea into a viable business. It also revealed factors that influence the early decision-making and business start-up processes.

Survey respondents were predominantly male (75 percent) and Caucasian (95 percent). The mean age was 40.8 years for males and 38.5 years for females; the overall mean age was 40.2 years. With increased education, the mean age for starting a business falls rapidly for females but rises for males.

Of the survey respondents who provided such information, 23.8 percent said they had moved to Arizona to found their firm. Sixty-five percent of this group had chosen Arizona because of a perceived business opportunity, while 61 percent selected climate as a factor in their decision, and 31.5 percent migrated in order to be closer to family and friends (see Table 5).

Various writers have pointed out that unemployed people and redundant workers (those with outdated or no-longer-needed skills) sometimes choose to start firms. In this survey, 30.4 percent of the respondents said that they had been unemployed within one year of starting their business.

Founder's Experience

It seems reasonable to postulate that the probability of success for a new business would be enhanced by the owner having previous experience both in starting a firm and in working at different kinds of jobs within the same industry. Of those responding, 58.8 percent said that this formation is their first, while 41.2 percent said they had started other businesses. The mean number of start-ups for those who had launched other firms was 2.46. Of those who were starting a first business, 70.0 percent had previously worked in the industry of the formation, while 30.0 percent had no experience in the industry.

Formal/Informal Education

Two in five respondents had some post-high-school education and one in three had graduated from college or had post-graduate training.

Some educators and writers, drawing on sociological and psychological research on entrepreneurship, believe that entrepreneurial skills can be taught; hence, economic growth could be stimulated by teaching about entrepreneurship. About one in four survey respondents starting their first business indicated that they had studied entrepreneurship. One in five who previously had established firms said they had specifically studied entrepreneurship. Of those who had studied entrepreneurship, 26.4 percent had taken a college course, 3.8 percent had attended a seminar, and 20.8 percent had read about it; 45.2 percent checked more than one of these choices.

Only one in four survey respondents contacted chambers of commerce, the Arizona Department of Commerce, management consult-

TABLE 3
GEOGRAPHIC DISTRIBUTION OF BUSINESS START-UPS
By Standard Industrial Classification (SIC), 1986, Metropolitan Phoenix

	Geographic Sector								
SIC*	*Phoenix*	*East Valley*	*Scottsdale*	*Glendale*	*Northwest*	*Southwest*	*Northeast*	*Southeast*	*Total*
Agriculture, Forest, and Fish	17	15	7	4	1	1	1	0	46
Mining	2	2	1	1	0	0	0	0	6
Construction	105	92	19	19	1	1	2	0	239
Manufacturing	67	54	13	9	3	1	3	0	150
Transportation, Communications, Public Utilities	58	32	11	5	1	0	0	0	107
Wholesale Trade	179	110	38	18	2	3	2	2	354
Retail Trade	405	312	127	83	13	6	20	6	972
Finance, Insurance, Real Estate	172	88	82	19	6	0	4	2	373
Services	599	375	158	90	17	14	12	2	1,267
Other	56	38	18	7	0	1	2	1	123
TOTAL	1,660	1,118	474	255	44	27	46	13	3,637
Retail Trade									
General Merchandise and Apparel	39	29	17	4	1	1	4	0	95
Eating and Drinking	110	78	29	23	4	0	4	3	251
Automotive Service and Repair	48	34	8	9	2	3	1	1	106
Food Stores	25	21	9	9	2	0	3	0	69
Other Retail	183	150	64	38	4	2	8	2	451
TOTAL	405	312	127	83	13	6	20	6	972
Services									
Personal Services	86	74	23	22	5	4	2	0	216
Health Services	50	36	11	10	5	3	1	1	117
Business Services	207	128	72	15	5	5	3	1	436
Other Services	256	137	52	43	2	2	6	0	498
TOTAL	599	375	158	90	17	14	12	2	1,267

*The SIC code was missing from several data entries, resulting in a small discrepancy in the total number of firms when classified by SIC rather than by city or zip code.

Source: Center for Business Research, College of Business, Arizona State University; and *Arizona New Business Review*, published by New Business Publishing, Inc., Phoenix, Ariz.